



U.S. DEPARTMENT OF ENERGY  
ENERGY STAR® QUALIFIED REFRIGERATORS  
PARTNER RESOURCE GUIDE



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# CONTENTS

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This Partner Resource Guide is designed to help you promote ENERGY STAR qualified refrigerators. Partners are free to use any of the text, charts, or images on Web sites, print advertisements, in-store promotional materials, and other marketing materials. The Guide is divided into two sections:

- Section I **CONSUMER INFORMATION** includes the latest consumer messaging on advanced technology, savings over non-qualified and older units, retirement savings, and best practices.
- Section II **MARKET INFORMATION** summarizes the most recent data on ENERGY STAR market share, the number of old units still in use, savings assumptions, and criteria for ENERGY STAR qualified refrigerators.

## INTRODUCTION

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After working 3,500 weeks with no vacation, a refrigerator purchased before 1993 is ready to retire. Retirement not only yields the environmental benefits that come with recycling, but it's also easy on your wallet. Replace your old fridge with a new ENERGY STAR qualified model: you'll save \$65 a year on your utility bill and get the latest technology to keep your food fresh.

## SECTION I: CONSUMER INFORMATION—SAVINGS

### ENERGY STAR VS. STANDARD MODELS

Thanks to recent improvements in insulation and compressors, today's refrigerators use much less energy than older models. With an ENERGY STAR qualified refrigerator, you can maximize your energy and dollar savings while helping to protect the environment.

- **TRIM YOUR ENERGY BILLS.** ENERGY STAR qualified refrigerators are required by the U.S. Department of Energy (DOE) to use 20% less energy than standard models. Choose a new, qualified model over a new, non-qualified model and cut your energy bills by \$165 over the lifetime of your fridge.
- **KEEP CLIMATE CHANGE IN THE FRIDGE.** Nearly 70 percent of U.S. electricity is generated with coal and natural gas, which release greenhouse gases into the atmosphere and contribute to global warming. ENERGY STAR qualified refrigerators use less energy and help us reduce our impact on the environment.



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ENERGY STAR is a government-backed program that helps consumers identify the most energy-efficient products.

### GET THE LATEST FEATURES

You can find the ENERGY STAR label on the most advanced refrigerators in a variety of designs, including French door, side by side, bottom-mount freezer, and top-mount freezer. Many ENERGY STAR qualified refrigerators use innovative drawer designs and improved temperature controls to keep your food fresher, longer.

### TECHNOLOGY SAVES YOU MONEY

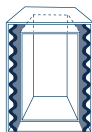
#### MORE PRECISE TEMPERATURE AND DEFROST MECHANISMS

help the refrigerator operate more efficiently, while ensuring food is kept at the optimum temperature.



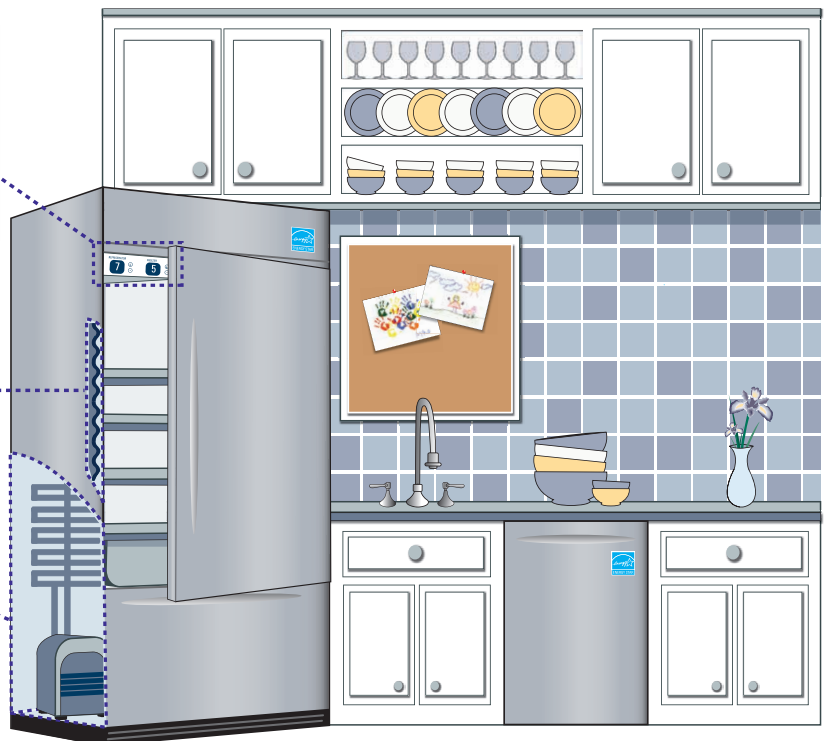
#### IMPROVED INSULATION

located in doors and exterior walls help food stay cold and muffle noise.



#### HIGH EFFICIENCY COMPRESSORS

use less energy to operate the refrigerator, often are quieter than regular compressors, and create less heat while they are running.



## SECTION I: CONSUMER INFORMATION—SAVINGS



### HOW MUCH IS THAT SIX-PACK COSTING YOU?

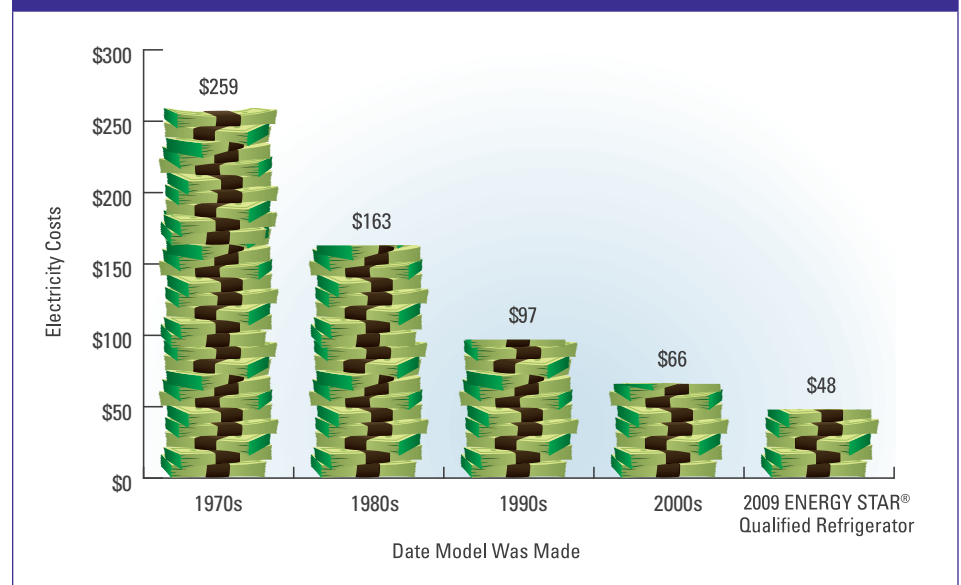
If you have an older refrigerator in your basement or garage, it could be costing you over \$100 per year to keep it running. That's a stiff price to pay to keep extra beverages cool. DOE recommends one of the following:

- Retire and recycle a pre-1993 refrigerator permanently. Getting your old fridge "off the grid" prevents further energy waste while capturing steel and other recyclable materials for new uses.
- If you only need extra food storage around holidays or special events, only plug in the old refrigerator when needed. Leaving it unplugged 10 months of the year will save you nearly \$85.
- For families that need a second refrigerator year round, replace the old one with a new ENERGY STAR qualified unit. You'll save about \$50 a year in operating costs.
- Pick the smallest size refrigerator to maximize savings. If you only need a little bit of extra space, an ENERGY STAR qualified compact refrigerator could save you over \$70 per year in operating costs.

### IS IT TIME TO REPLACE YOUR OLD REFRIGERATOR?

If you have a fridge from the 1980s, replace it with an ENERGY STAR qualified model and save over \$100 each year on your utility bills.

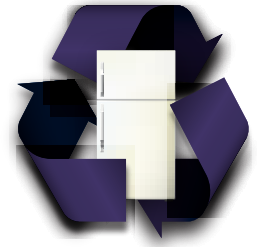
#### HOW MUCH DOES IT COST TO RUN YOUR REFRIGERATOR EACH YEAR?



## SECTION I: CONSUMER INFORMATION—REFRIGERATOR RECYCLING

### WHY RECYCLE?

The typical appliance contains about 75% steel, which can be recycled into cans, new cars, or any number of other steel products. Steel recycling also conserves precious natural resources. According to the Association of Home Appliance Manufacturers (AHAM), it takes four times more energy to manufacture steel from virgin ore as it does to make the same steel from recycled scrap. Refrigerators also include a refrigerant, such as freon, that must be captured by a certified technician to ensure it isn't released into the air where it can damage the ozone layer.



### HOW DO I RECYCLE MY OLD APPLIANCE?

Your local solid waste organization, garbage company, or municipal government may take used appliances for a small charge or offer free curb-side pickup on certain days. According to the Appliance Recycling Information Center, there are 11,000 appliance-recycling locations nationwide. Use the Steel Recycling Institute's database ([www.recycle-steel.org/database](http://www.recycle-steel.org/database)) to find the recycling facility closest to you. You can also call 1-800-YES-1-CAN.



Participate in the “Make a Cool Change: Recycle Your Old Fridge” Campaign to educate consumers about the high cost of running an old fridge. Visit [www.energystar.gov/recycle](http://www.energystar.gov/recycle) to download historical cost graphs, order slide-rule savings calculators, and access compelling savings messaging to help you encourage the replacement of old models with new ENERGY STAR qualified units.

### BEST PRACTICES

- **KEEP TEMPERATURES COOL, BUT NOT TOO COOL.** Keep your refrigerator at 35 to 38 degrees Fahrenheit. It takes more energy to keep a fridge at lower temperatures, which may just freeze your lettuce anyway.
- **PLACE YOUR FRIDGE IN A COOL PLACE.** Position your refrigerator away from a heat source such as an oven, a dishwasher, or direct sunlight from a window.
- **ALLOW AIR CIRCULATION BEHIND THE FRIDGE.** Leave a few inches between the wall and the refrigerator to reduce heat buildup and increase energy efficiency. Also, keep the condenser coils clean if you have an older model. Read the user's manual to learn how to safely clean coils. Coil cleaning brushes can be purchased at most hardware stores.
- **CHECK THE DOOR SEALS.** Make sure the refrigerator seals around the door are airtight. If not, replace them. They can be ordered easily online using your model number as a reference.
- **KEEP THE DOOR CLOSED.** Minimize the amount of time the refrigerator door is open. As you stand with the door open deciding between mustard and mayonnaise, your fridge is working hard to cool the outside air you're letting in.



## SECTION I: CONSUMER INFORMATION—SAVINGS FACTS

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### WANT TO LEARN MORE?

If you would like to know more about energy and money savings for a specific refrigerator model, visit [www.energystar.gov/refrigerators](http://www.energystar.gov/refrigerators) and follow the link to the ENERGY STAR Refrigerator Retirement Calculator.

### RETIRE

Retiring the old refrigerator in your garage or basement can save more than \$100 a year in operating costs. Over five years, that's enough money to buy:

- 125 12-packs of soft drinks
- A circular saw, rotary hammer, cordless power drill, and finishing sander
- 100 ENERGY STAR qualified light bulbs
- A computer
- A pool table
- A ping-pong table and air hockey table

### REPLACE WITH COMPACT

Replacing the old refrigerator in your garage or basement with a new ENERGY STAR qualified compact refrigerator can save over \$70 a year in operating costs. Over five years, that's enough money to buy:

- An ENERGY STAR qualified compact refrigerator
- 85 12-packs of soft drinks
- An air hockey table
- A Nintendo Wii and two games

### REPLACE WITH FULL SIZE

Replacing your old full-size refrigerator with a new ENERGY STAR qualified model can save nearly \$60 a year in operating costs. Over five years, that's enough money to buy:

- A 32" television
- A 15" LCD television
- Two microwave ovens
- A seven megapixel digital camera

## SECTION II: MARKET INFORMATION

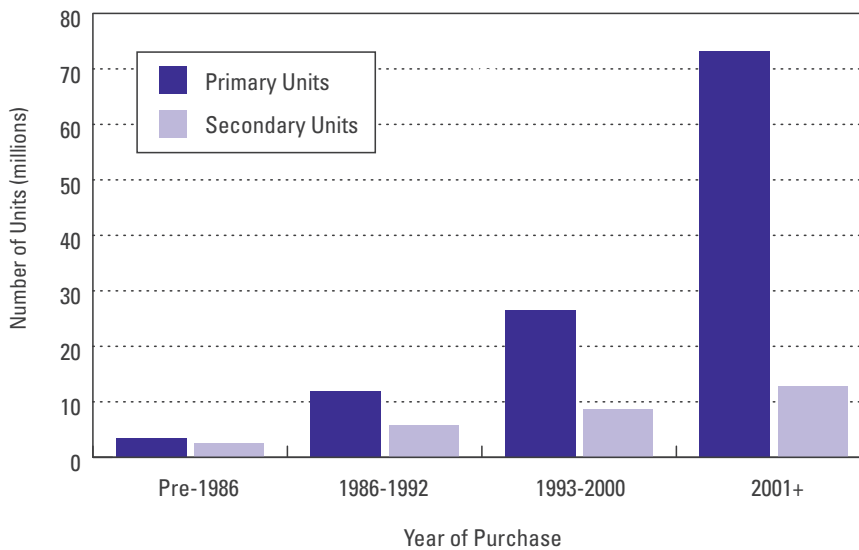
### ENERGY STAR MARKET SHARE

DOE estimates that 145 million refrigerators and refrigerator-freezers are currently in use in the U.S.

- About 30% of these units are ENERGY STAR qualified.
- Over 50 million refrigerators are over 10 years old, costing consumers \$4.8 billion a year in energy costs.
- Over 30 million refrigerators are second units.



### NUMBER OF OLD REFRIGERATORS IN THE U.S.



Source: D&R International projections based on Residential Energy Consumption Survey, Energy Information Administration, 2005.

### SAVINGS ASSUMPTIONS

- Average lifetime of a new refrigerator = 12 years<sup>1</sup>
- ENERGY STAR price premium = \$30 to \$100
- Time to recover the price premium= 3 to 8 years
- Average annual savings of new, ENERGY STAR model vs. new, non-qualified model = \$12
- ENERGY STAR price range (for full-size refrigerators) = \$400 - \$5,000<sup>2</sup>
- Standard refrigerator price range (for full-size refrigerators) = \$300 - \$5,000<sup>3</sup>
- Average annual degradation in efficiency = 1.37%<sup>4</sup>

### ENERGY STAR CRITERIA

To meet the current ENERGY STAR criteria, a refrigerator must be at least 20% more energy efficient than standard models. These criteria became effective on April 28, 2008.

SIZE	VOLUME	% BETTER THAN FEDERAL STANDARD
Full-size refrigerators	7.75 cubic feet or greater	20%
Compact refrigerators	Less than 7.75 cubic feet and 36 inches or less in height	20%



## ENDNOTES

<sup>1</sup> "31<sup>st</sup> Annual Portrait of the U.S. Appliance Industry," *Appliance Magazine*, September 2008.

<sup>2</sup> Based on data gathered by D&R International from national retailer Web sites, 2009.

<sup>3</sup> Ibid.

<sup>4</sup> Miller, J.D., and Pratt, R.G, "Estimates of Refrigerator Loads in Public Housing Based on Metered Consumption Data," Pacific Northwest National Laboratory, 1998.



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